



Lone Star Region

National Model Railroad Association

Introduction to Scratchbuilding Structures

- Mike Jobe



Intro to Scratch Building Structures

- Selecting a structure
- Creating plans
- Materials
- Tools you will need
- Basic building techniques & tips
- Golden Rules
- Resources





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Selecting a structure to build



Selecting a structure

Really that is the hardest part of scratch building is selecting the right structure to build.



Probably not a good idea to start off attempting this

A better choice



Selecting a structure



Selecting a structure

a) They are all simple and square.



b) You can generate plans by just the photo.



c) You can pretty much guess what is in the interior.





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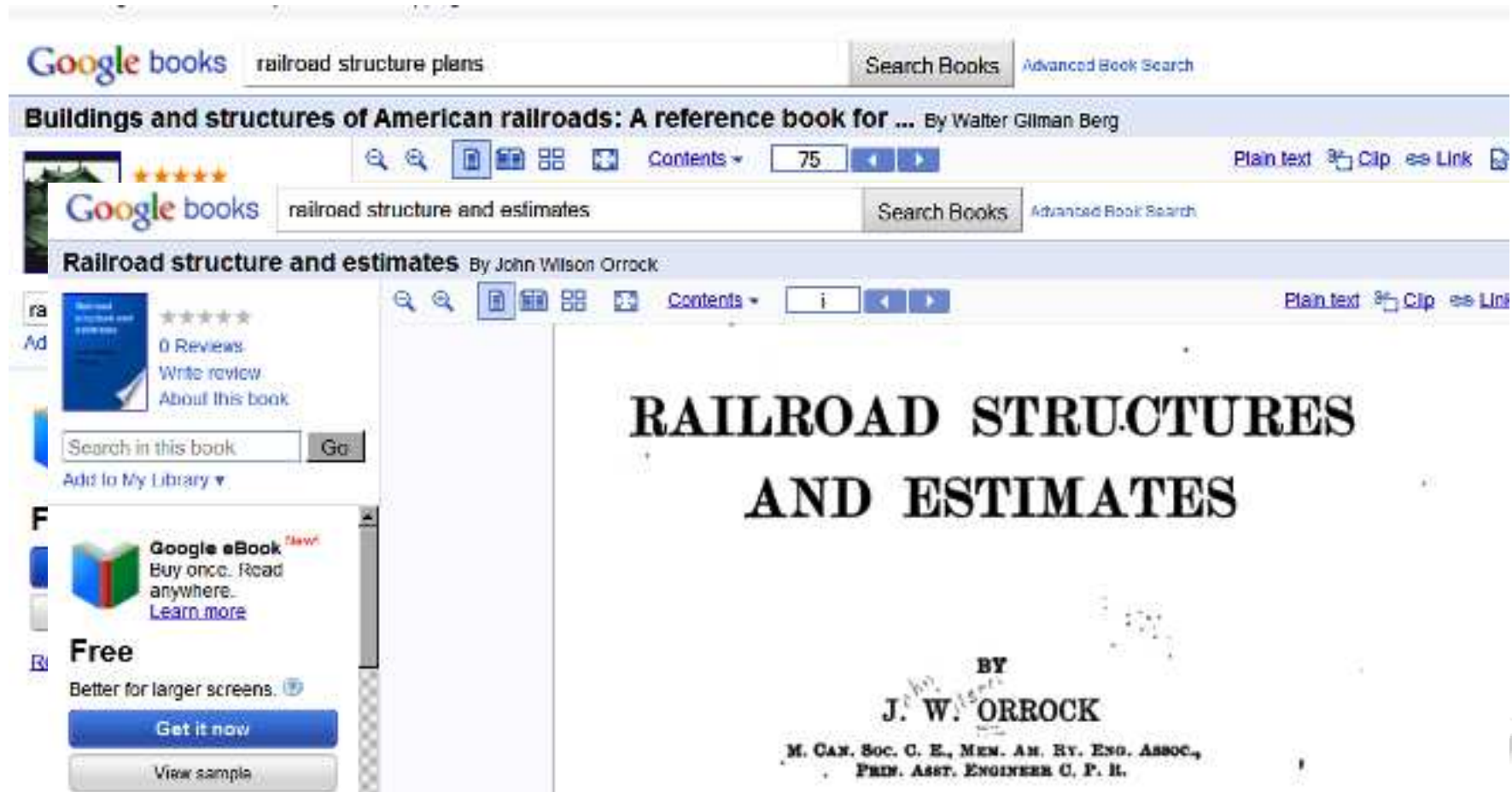
Creating Plans



Creating Plans

There are several ways to create plans....

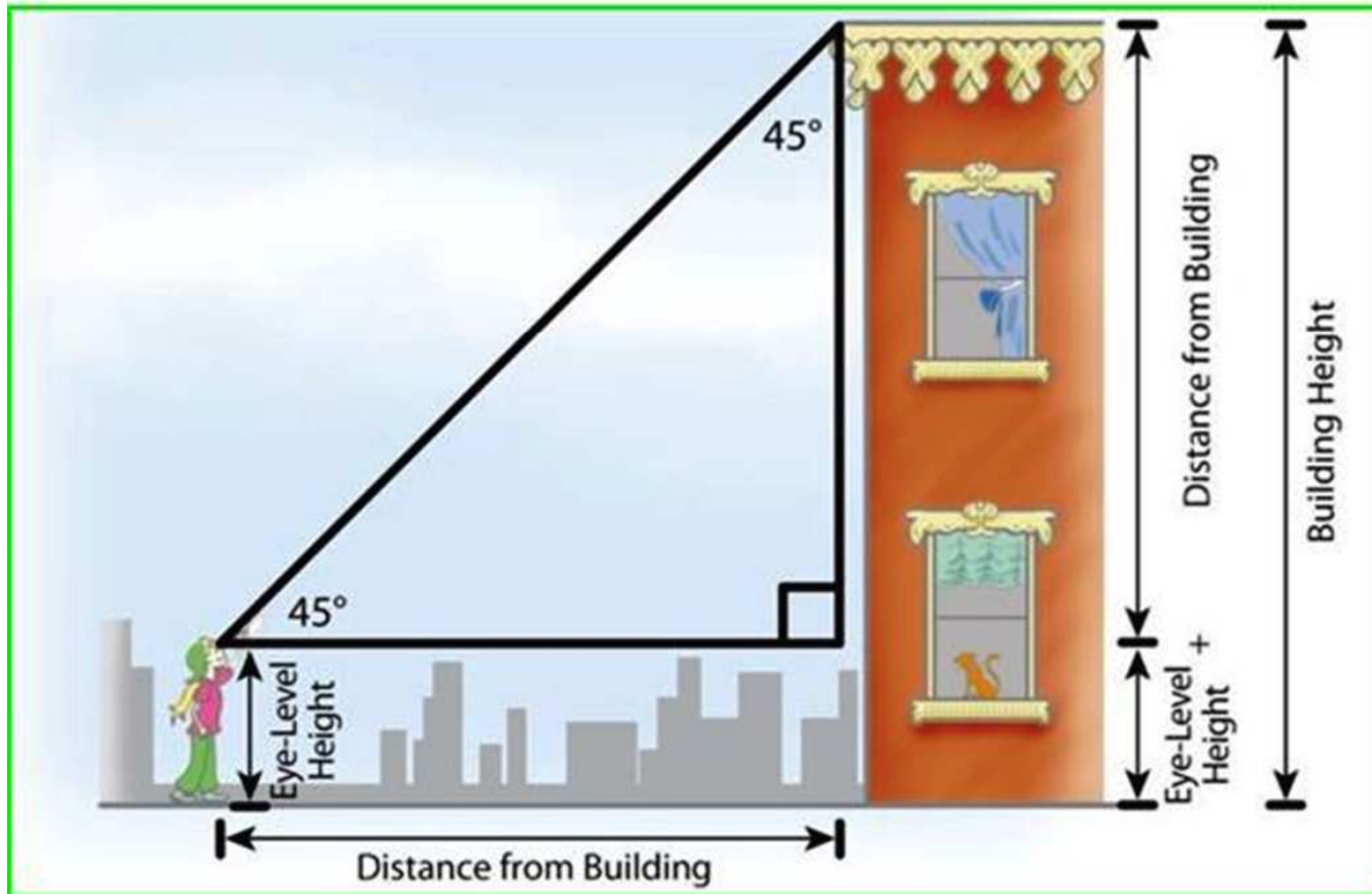
1. Search the internet, an example is Google Books; “railroad structure”



Creating Plans

There are several ways to create plans....

2. Get out and hit the road measure the structure yourself



Creating Plans

There are several ways to create plans....

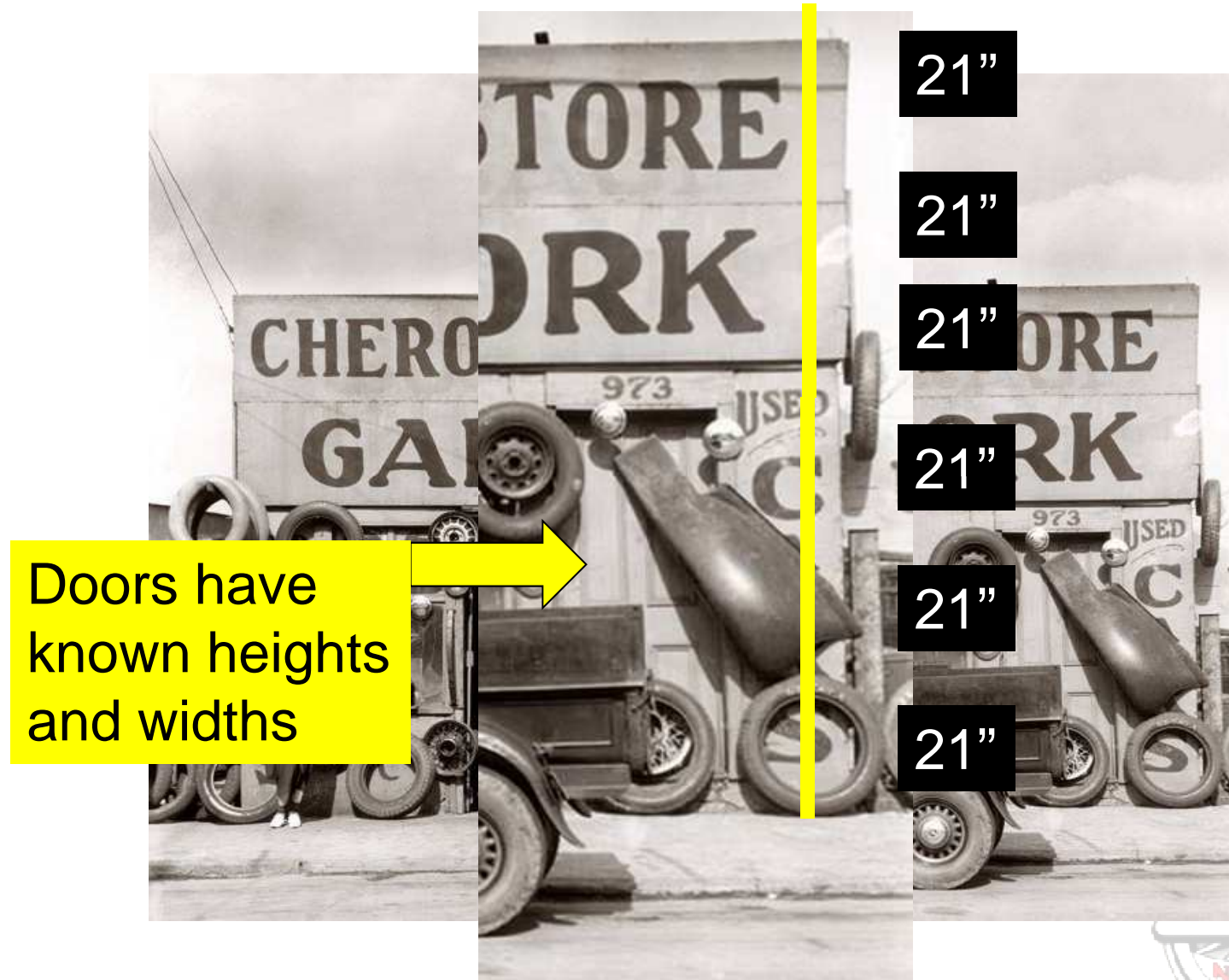
3. Copy a cheap kit....



4. Borrow / Buy old used Craftsman Kit templates / instructions



Creating Plans



Creating Plans

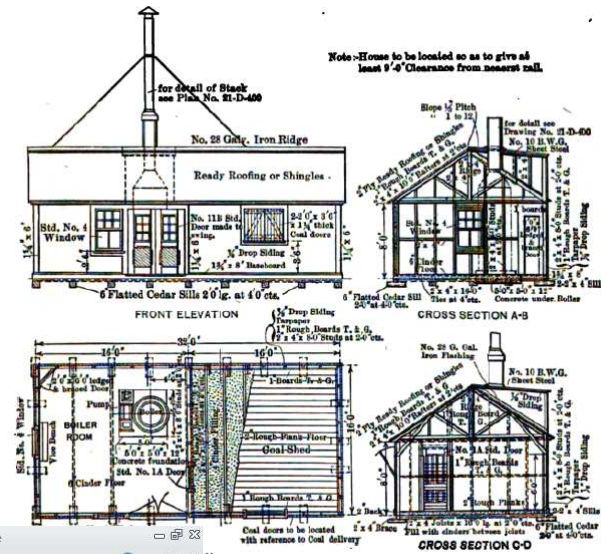
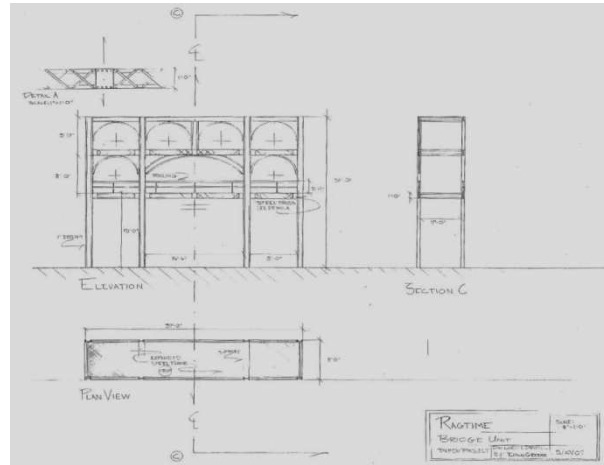
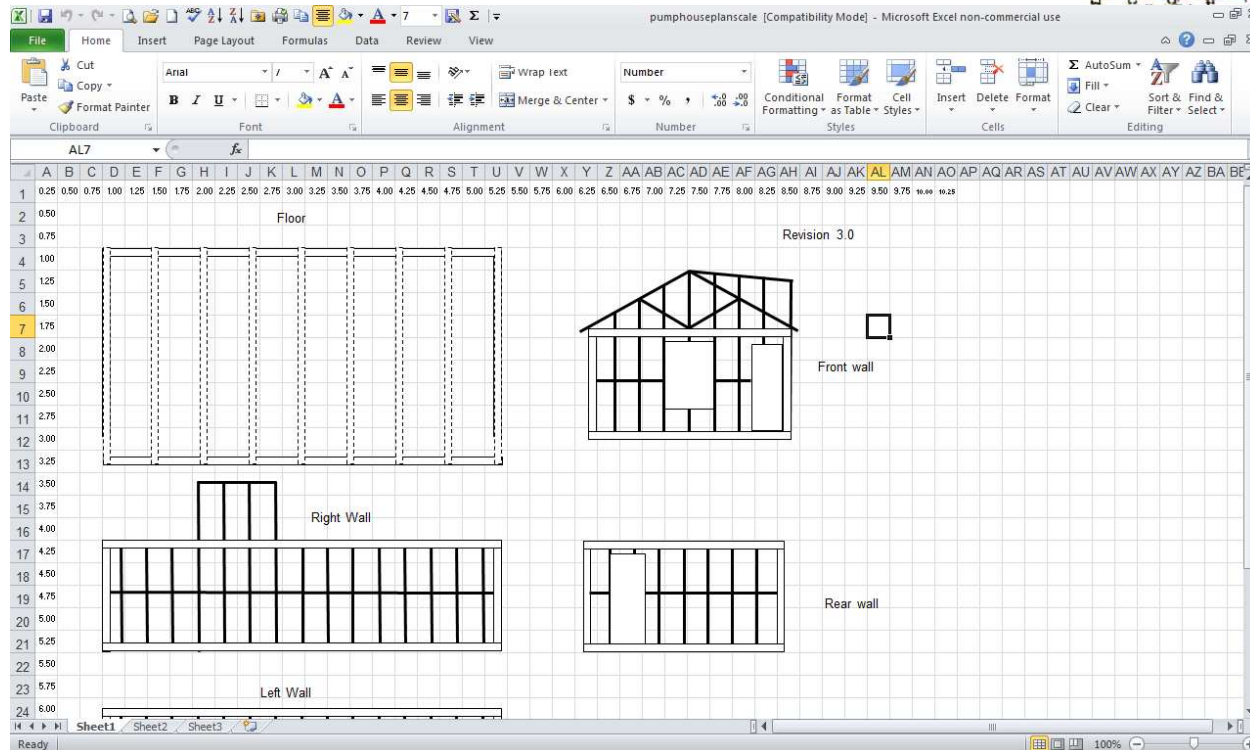
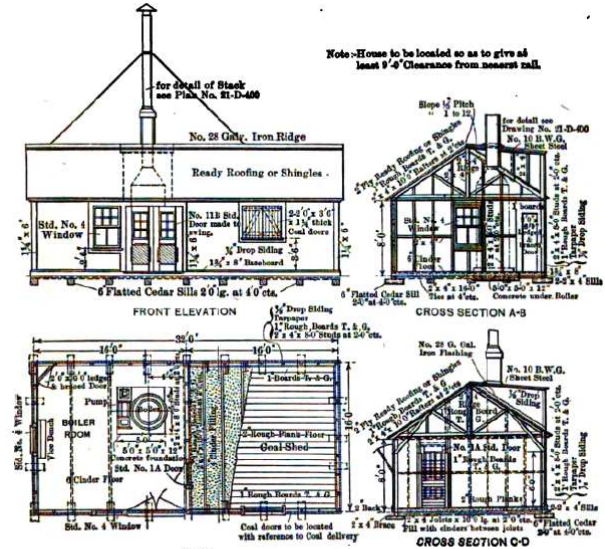
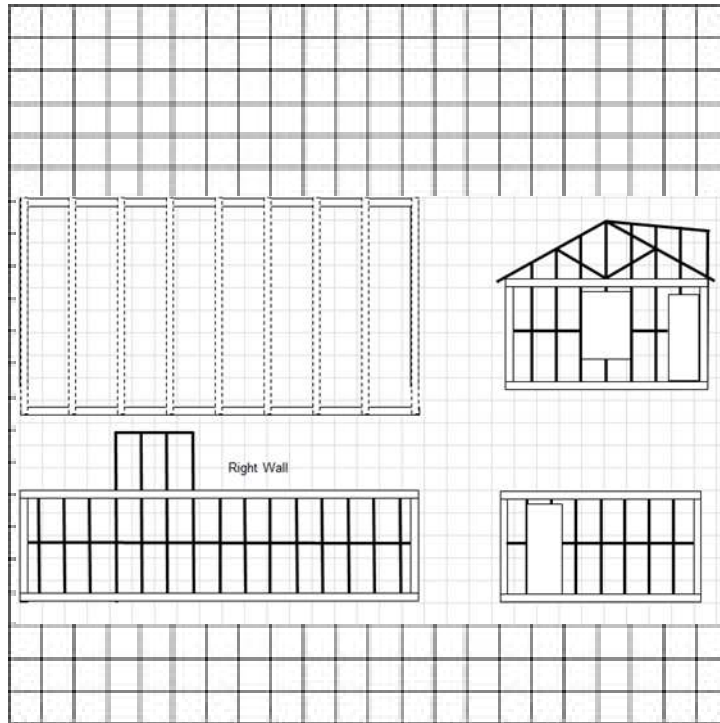


Fig. 214. Frame Pump House.

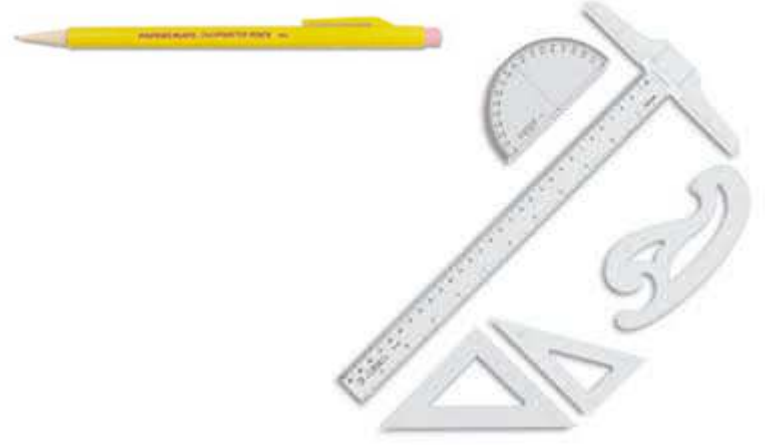


Creating Plans



PLAN

Fig. 214. Frame Pump House.





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Materials



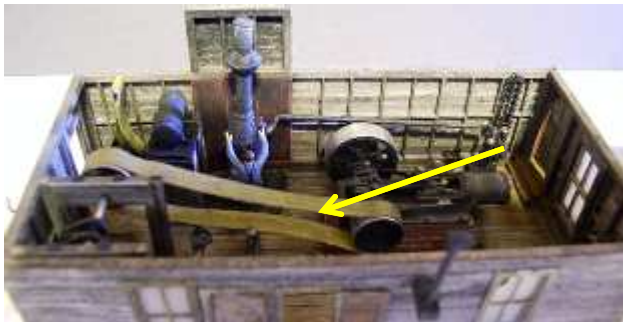
Materials

Use your imagination! I constantly am looking for things that can be used in the build



Materials

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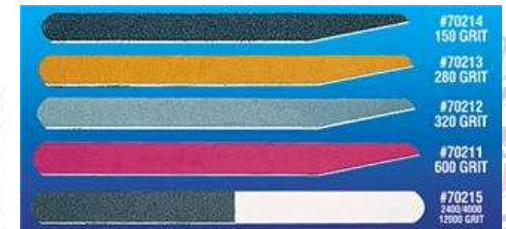
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Tools you will need

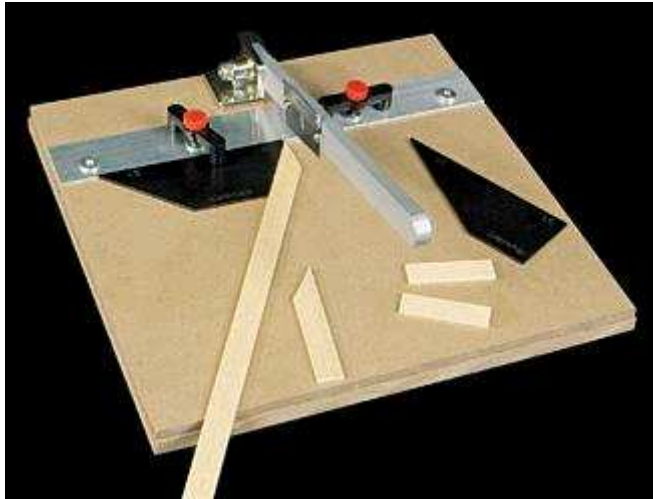


Tools you will need.

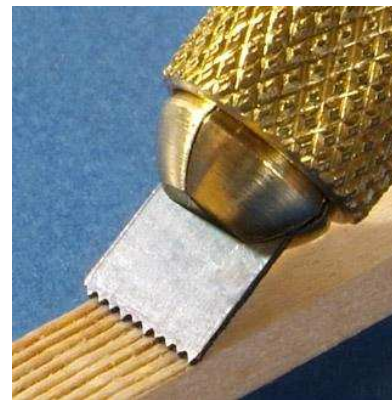
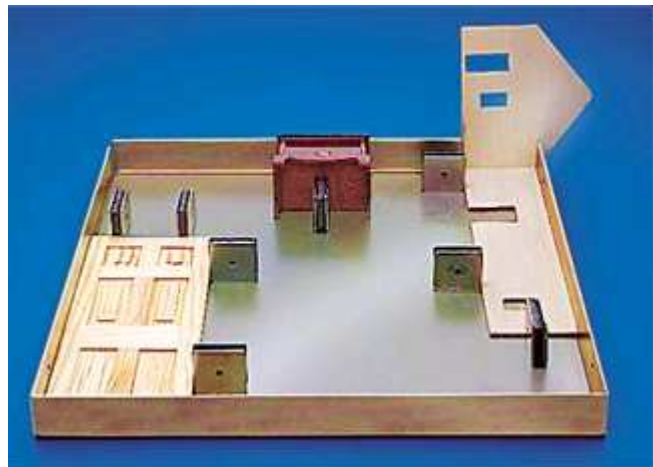
The Basics...



Tools you will need.



Pounce Wheel





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Building Techniques & Tips



Building Techniques & Tips



Notice how nothing pops out at you,
everything blends together



RULE 1 Keeping the end game in mind during your build

Building Techniques & Tips

After dyeing the boards, scribe the wood grain into the surface, add knot holes, don't be afraid to damage some pieces.



Staining the wood is as simple as placing them in the bottle

Building Techniques & Tips

P'

ce or

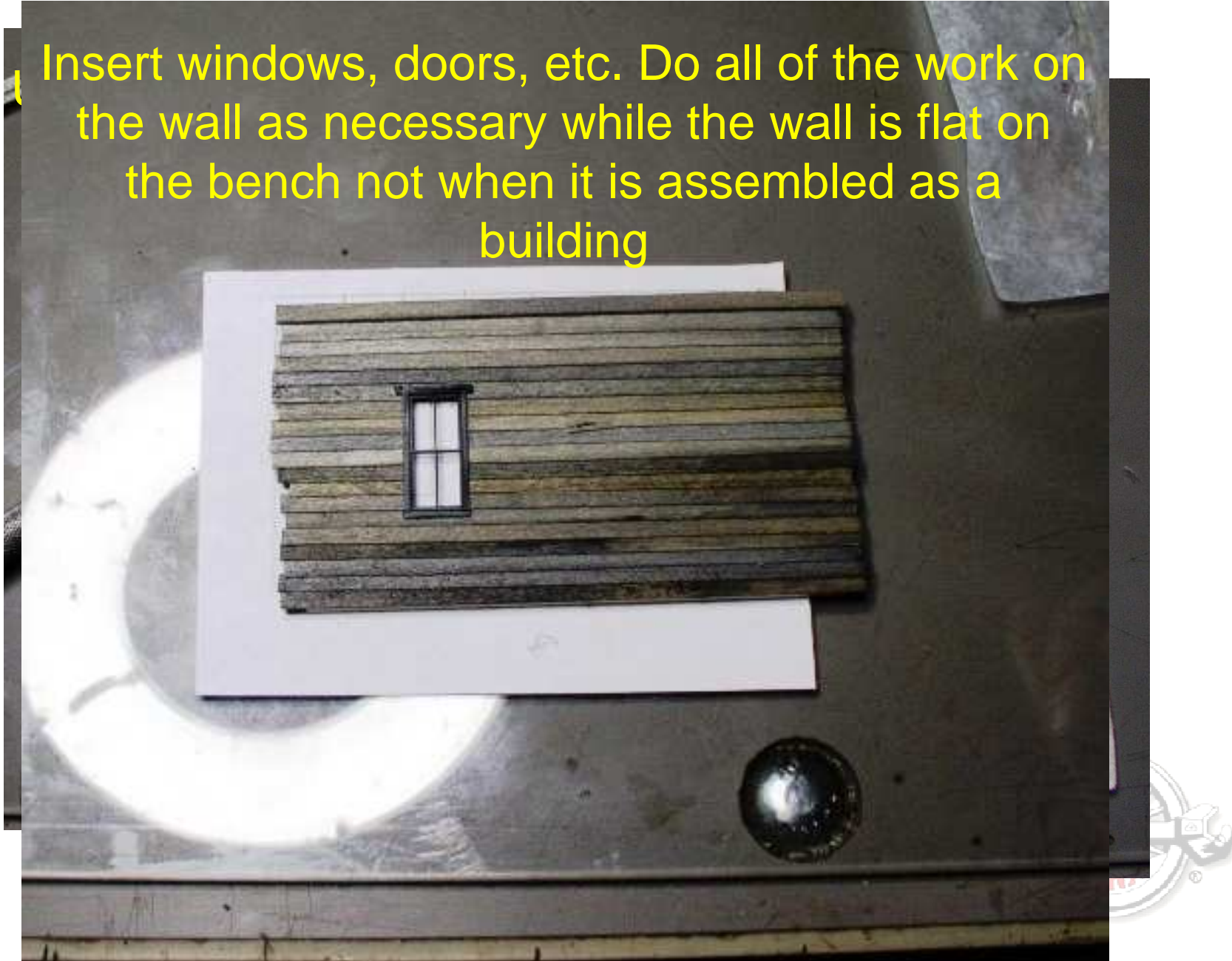
Dip
in gl

Complete the framing (make sure to
Dry fit the window and doors)



Building Techniques & Tips

Insert windows, doors, etc. Do all of the work on the wall as necessary while the wall is flat on the bench not when it is assembled as a building

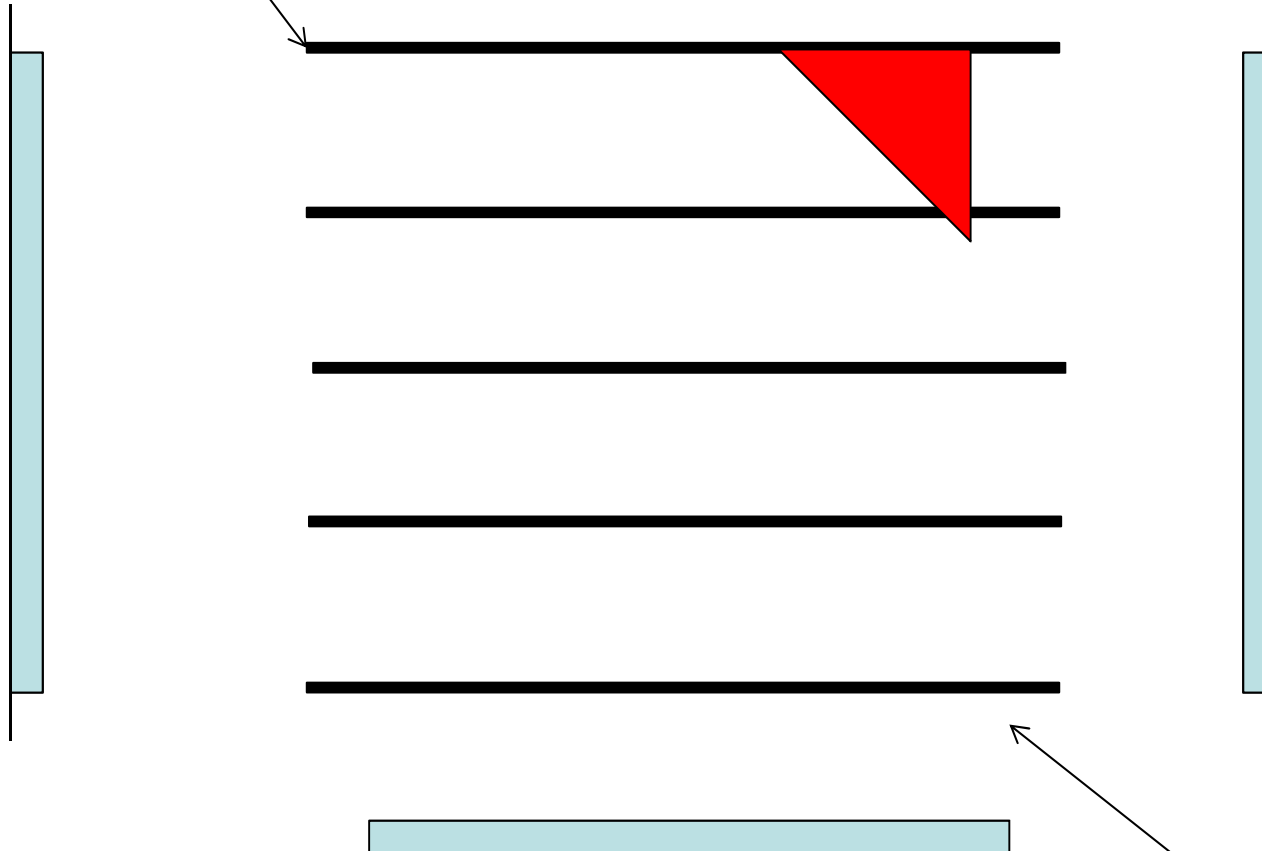


Building Techniques & Tips

Complete the 4 walls

Add rafters

Double check it
is at 90 degrees!

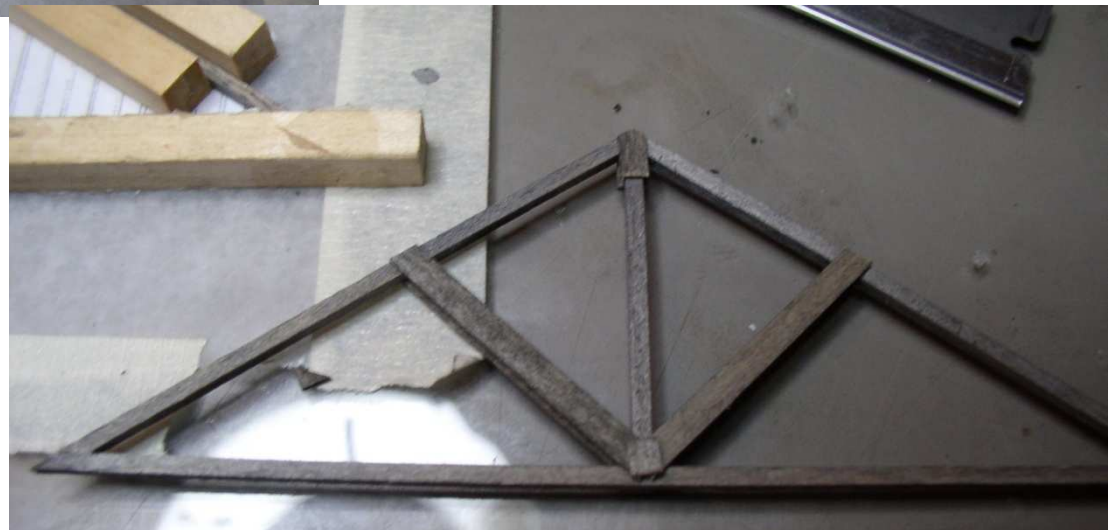
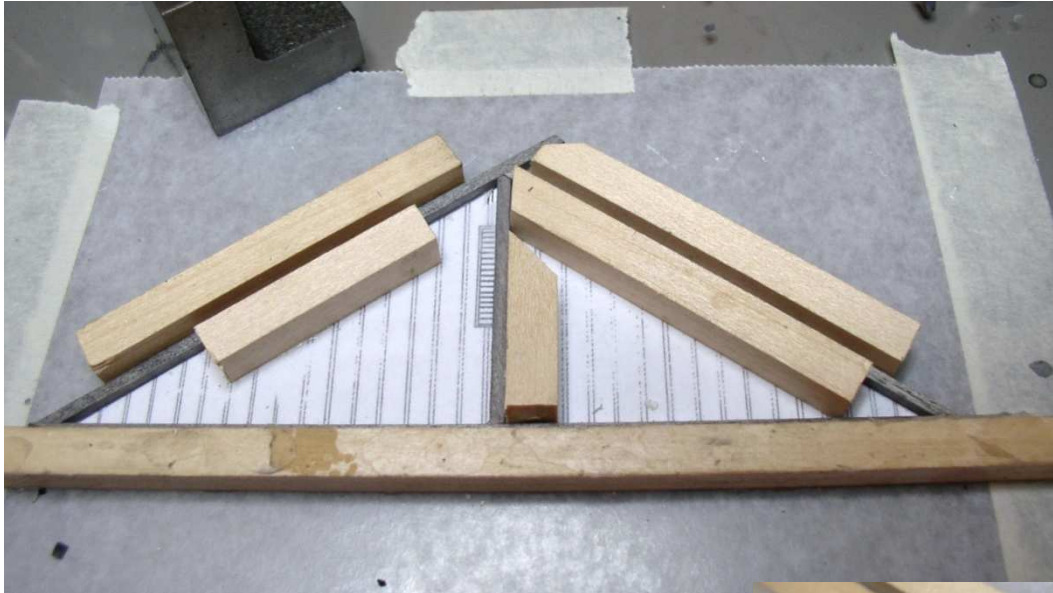


Trim excess siding
then glue together



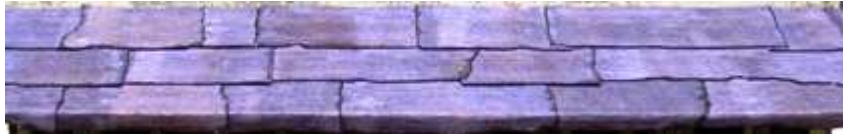
Building Techniques & Tips

If you need to repeat a pattern of work such as for trestles or roof rafters construct a jig.



Building Techniques & Tips

Roofing options for you... Mount material over card stock



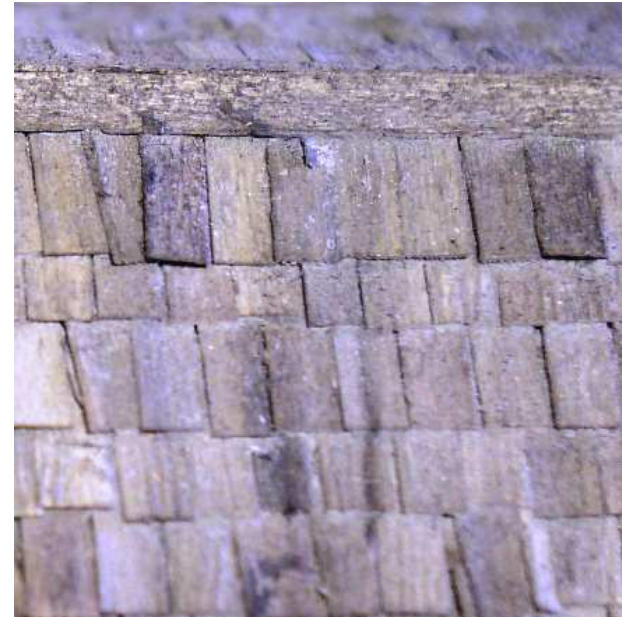
Tar paper made from paper.
First cut in scale widths, then
painted using grimy black
and dry brushed with antique
white



Campbell's corrugated roofing
dipped in printed circuit board
etchant (make sure you
neutralize)



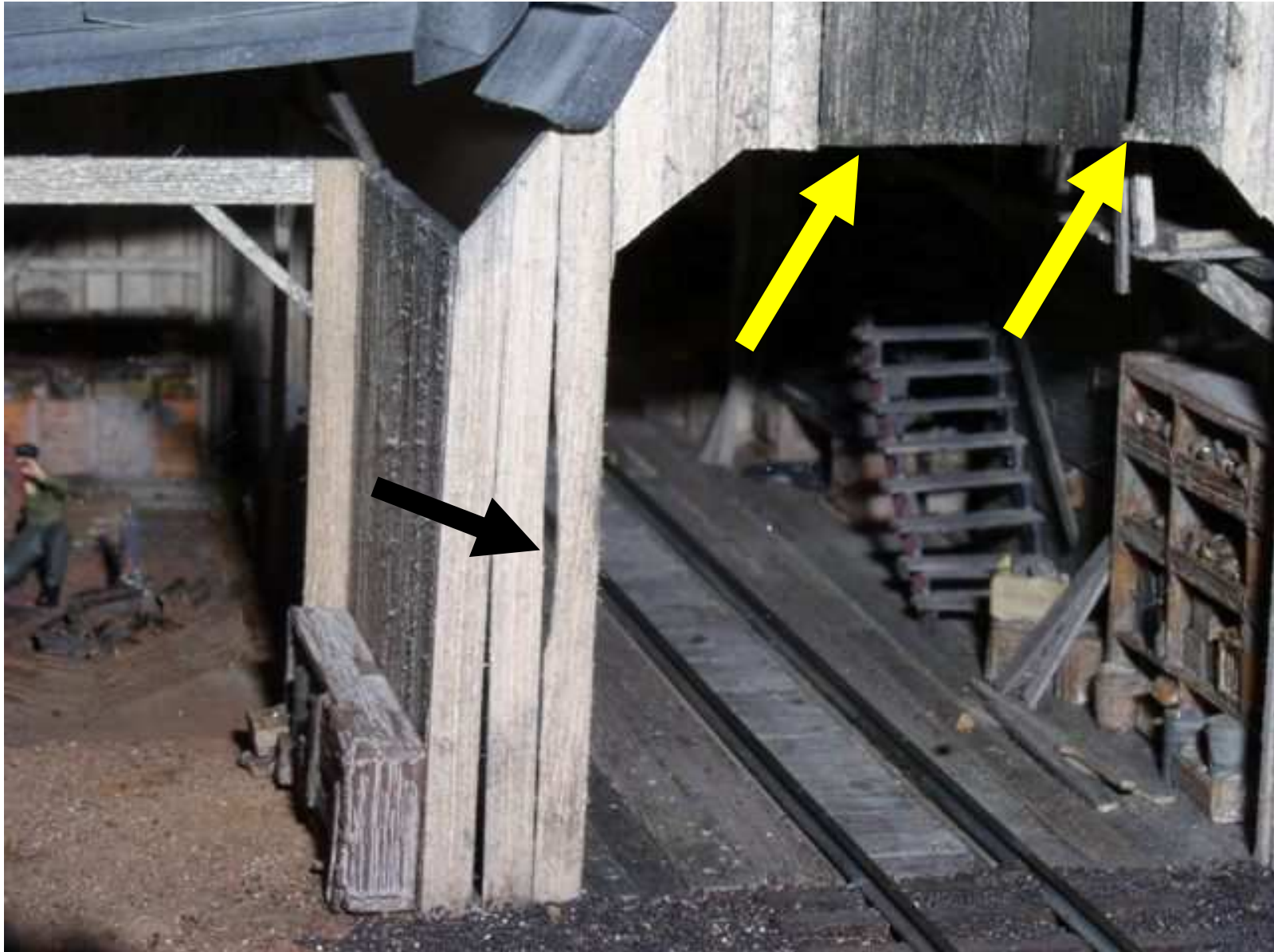
Campbell's shingles
or even better Bar
Mills Laser shingles



Scale appropriate wood
stained, distressed, and cut
into individual shingles



Building Techniques & Tips



Building Techniques & Tips



Building Techniques & Tips



ght



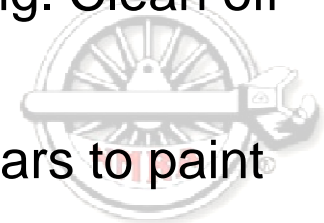
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Golden Rules



Golden Rules

- **Work on walls while they flat** ..It is easier to place doors, windows, signs, stain, paint etc before you assembly the 4 walls.
- **Strive for Plumb, Level & Square.** One mistake now will require 2X the work to compensate later. Overall human nature is focus on the what's wrong versus everything else that is right.
- **Attempt to age and weather the model.** Even what are meant to be new buildings will not look right at smaller scales. A bright shiny building will stick out look a sore thumb. Chalks, Stains, Alcohol and Ink as well as white highlighting go a long way.
- **Always keep in mind how the building will look on the layout when it is done (the end game).** When picking colors, finishes and overall look and type, ask yourself will it blend in? Will it fit and look right.
- **Don't overdo it with glue.** It does not take that much, particularly once a section is built, like real structures they can be incredibly strong. Clean off excessive glue.
- **Be patient and keep organized.** Michelangelo took years to paint the Sistine Chapel... if you are tired stop for the day.





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Resources



Building Techniques & Tips

Seek out other modelers and how they scratch build

<http://missing-lynx.com/>



<http://www.railroad-line.com/>



NMRA Members

ModelersGuild
Building lasting memories



There are several forums available to you....





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**Scratch building can bring you great
pleasure, enhance your modeling skills!**

THANKS!

